

Air Quality LS 4.1/4.2
How Does Air Pollution Affect Other Regions?

As a class read pages 177-178, then on your own write a summary in 1 or 2 sentences.

Read *What's the Point* on page 186.

What are the Products of Combustion from Coal-burning power plants?

Read the last paragraph on page 190, then draw comic strip to illustrate the story of coal. Give your comic strip a title.

Title: _____

Read the first paragraph on the top of page 191.

Take a virtual tour of a coal-burning power plant.

<http://www.its-about-time.com/htmls/investines/coal.html>

As you take the virtual tour answer the following questions.

Analyze Your Data

1. Where does combustion take place in a coal burning power plant?
2. What fuel is used in combustion?
3. What processes prepare the fuel for combustion?
4. What products of combustion did you see in the virtual tour? Which of these are characters in the *Sickening Six* play?
5. What causes the turbine to spin?
6. What happens in the precipitator?
7. What happens in the scrubber?
8. Why are the precipitator and the scrubber needed?

What Kind of Pollutants Come From Burning Coal?

Read pages 192 and 193 and complete the following charts.

Advantages of Coal

Disadvantages of Coal

Products of Combustion of Coal

Product	Is this a pollutant?	Other Important Information About the Product

Stop and Think

The wind direction and products of combustion suggest ways that coal burning power plants in the Midwest and South might lead to poor air quality in the Adirondacks. Answer the following questions with your group. Look at the topographical map on page 187, the map on page 188 and the wind currents map on page 189 to help you answer the questions.

1. What kinds of pollutants do coal burning plants produce?
2. How can power plants in the Midwest and South affect air quality problems in the East?

3. How might pollutants carried by the winds affect air quality in the Adirondacks? Be specific and identify primary and secondary pollutants.

Demonstration

Acids in the Air

- ∞ Read page 194 as a class and discuss.

What's the Point?

Draw a mind map to illustrate what you know about Adirondacks air quality.